Title (en)

OPTICAL FIBER, OPTICAL FIBER RIBBON, AND OPTICAL FIBER CABLE

Title (de)

GLASFASER, GLASFASERBAND UND GLASFASERKABEL

Title (fr)

FIBRE OPTIQUE, RUBAN DE FIBRE OPTIQUE ET CÂBLE À FIBRE OPTIQUE

Publication

EP 4283352 A1 20231129 (EN)

Application

EP 22742618 A 20220119

Priority

- JP 2021007797 A 20210121
- JP 2022001856 W 20220119

Abstract (en)

An optical fiber includes a core portion, a side core layer, a cladding portion, a primary layer, and a secondary layer. Regarding a relative refractive-index difference Δ1 of the core portion, a relative refractive-index difference Δ2 of the side core layer, and a relative refractive-index difference ΔClad of the cladding portion; the relationship Δ1>ΔClad>Δ2 holds true as well as the relationship 0>Δ2 holds true. That is, when the relative refractive-index difference Δ1 is equal to or greater than 0.23% and equal to or smaller than 0.30%, when the relative refractive-index difference Δ2 is equal to or greater than -0.23% and equal to or smaller than -0.08%, when the difference (Δ1-Δ2) is equal to or greater than 0.36% and equal to or smaller than 0.53%, when a core diameter 2a represents the core diameter of the core portion, and when an outer diameter 2b represents the outer diameter of the side core layer; the ratio b/a is equal to or greater than 2 and equal to or smaller than 5; the core diameter 2a is equal to or greater than 11.5 μm and equal to or smaller than 14.5 μm; the effective core area at the wavelength of 1550 nm is equal to or greater than 100 μm² and equal to or smaller than 160 μm²; the primary layer thickness as well as the secondary layer thickness is equal to 5 μm; the primary elastic modulus is smaller than the secondary elastic modulus; and the microbending loss at the wavelength of 1550 is equal to or smaller than 1.0 dB/km.

IPC 8 full level

G02B 6/036 (2006.01); **G02B 6/44** (2006.01)

CPC (source: EP US)

G02B 6/02019 (2013.01 - US); **G02B 6/02395** (2013.01 - EP US); **G02B 6/03627** (2013.01 - EP US); **G02B 6/0365** (2013.01 - EP)

Designated contracting state (EPC)

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DOCDB simple family (application)

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